



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,937	04/13/2005	Tadashi Utsunomiya	Q83622	5196
23373	7590	10/19/2010		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER LIGHTFOOT, ELENA TSOY	
			ART UNIT	PAPER NUMBER
			1715	
			NOTIFICATION DATE	DELIVERY MODE
			10/19/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

### Office Action Summary

**Application No.**

10/508,937

**Applicant(s)**

UTSUNOMIYA ET AL.

**Examiner**

ELENA Tsoy LIGHTFOOT

**Art Unit**

1715

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2010.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4, 5, 7, 8, 10, 12-17, 20 and 22-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 4, 5, 7, 8, 10, 12-17, 20 and 22-24 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/30/2010  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 30, 2010 has been entered.

***Response to Amendment***

Amendment filed on July 30, 2010 has been entered. Claims 18-19 have been cancelled. Claims 1, 4, 5, 7, 8, 10, 12-17, 20, and 22-24 are pending in the application.

Claims examined on the merits are 1, 4, 5, 7, 8, 10, 12-17, 20, and 22-24.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 5, 10, 12-17 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (JP 2001225392 A) in view of Kawabuchi et al (US 5,945,463), further in view of Gelbart (US 6180325), Young (US 6561640) and Schmidt (US 6841116).

Watanabe et al in view of Kawabuchi et al is applied here for the same reasons as set forth in paragraphs 4 and 11 of the Office Action mailed on 2/3/10 since limitations of claims 18-19 is now incorporated into claim 1.

The cited prior art fails to teach that an irradiation device is moved in association with the extrusion orifice of the three-dimensional automatic coating controlling apparatus.

As discussed previously, Kawabuchi teaches: "As an example of the present invention, FIG. 1 shows a *schematic representation* of an embodiment of the apparatus for discharging and curing the composition curable by ultraviolet light which is used for producing a gasket for sealing a gap between a dust cover and a container encasing a magnetic disk of HDD. The apparatus is equipped with a control part for an X-Y-Z-driving robot 1, a pipe for supplying a composition curable by ultraviolet light 2, a dispenser 3, and an apparatus for irradiation of ultraviolet light... The apparatus for irradiation of ultraviolet light irradiates ultraviolet light to the composition curable by ultraviolet light which has been discharged from the dispenser, and the composition is **quickly cured**" (See column 9, lines 23-40).

In other words, Kawabuchi explicitly teaches that Fig. 1 shows a *schematic representation* of an embodiment of the apparatus for discharging and an apparatus for irradiation of ultraviolet light. Note that the apparatus in Fig. 1 moves together with dispenser 3. Therefore, in contrast to Applicants assertion, the apparatus for discharging and an apparatus for irradiation of ultraviolet light move together to quickly cure the gasket composition discharged from the dispenser to maintain an extruded shape.

However, Applicants maintain their argument that Figs. 1 and 2 and column 9, lines 23-40 in Kawabuchi et al do not show that a gasket material extruded from an extrusion orifice onto

the cover may be cured while extruding using UV apparatus that is moved together with a dispenser to maintain an extruded shape.

The references of Gelbart, Young and Schmidt are cited herein to show that mounting radiation source on a moving dispenser to immediately start curing the applied coating is known in the art:

**Gelbart** teaches that a UV light source 36 is preferably mounted to moving head 20 (See column 5, lines 13-15) and travels as part of the same head 20 which includes coating applicator 26 (See Fig. 1; column 7, line 65 to column 8, line 6).

**Young** teaches that an applicator 120 and an ultraviolet light emitting device subsystem 140 can both be mounted on a moving carriage (See Fig. 3; column 8, lines 29-32).

**Schmidt** teaches that an actinic radiation source 36 may be mounted directly on the dispensing trolley, if desired (See column 14, lines 52-55).

Thus, the references of Gelbart, Young and Schmidt show that it is well known in the art to mount an ultraviolet light emitting device on a moving dispenser to quickly cure the applied coating.

Therefore, even if it is conceded that Kawabuchi does not teach that UV apparatus is moved together with a dispenser, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have mounted an ultraviolet light emitting device on an apparatus for discharging in Kawabuchi such that the ultraviolet light emitting device move together with apparatus for discharging with the expectation of providing the desired quick curing of the extruded gasket to maintain an extruded shape, since it is well known in the art to

mount an ultraviolet light emitting device on a moving dispenser to quickly cure the applied coating, as evidenced by references of Gelbart, Young and Schmidt.

3. Claims 1, 4, 5, 7, 8, 10, 12-17, 20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakamatsu (JP 2001182836 A) in view of Watanabe et al '392, further in view of Kawabuchi et al '463, and further in view of Gelbart '325, Young '640 and Schmidt '116 for the reasons discussed above.

Wakamatsu in view of Watanabe et al further in view of Kawabuchi et al is applied here for the same reasons as set forth in paragraphs 5 and 11 of the Office Action mailed on 2/3/10 since limitations of claims 18-19 is now incorporated into claim 1.

The references of Gelbart, Young and Schmidt are applied for the reasons discussed above.

4. Claims 1, 4, 5, 10, 12-17 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al '392 in view of Wakamatsu '836, further in view of Kawabuchi et al '463, and further in view of Gelbart '325, Young '640 and Schmidt '116 for the reasons discussed above.

Watanabe et al in view of Wakamatsu, further in view of Kawabuchi et al is applied here for the same reasons as set forth in paragraphs 6 and 11 of the Office Action mailed on 2/3/10 since limitations of claims 18-19 is now incorporated into claim 1.

The references of Gelbart, Young and Schmidt are applied for the reasons discussed above.

5. Claims 1, 4, 5, 7, 8, 10, 12-17, 20, and 22-24 under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al '392 in view of Bernd et al (US 5731541), further in view of

Kawabuchi et al '463, and further in view of Gelbart '325, Young '640 and Schmidt '116 for the reasons discussed above.

Watanabe et al in view of Bernd et al, further in view of Kawabuchi et al is applied here for the same reasons as set forth in paragraphs 7 and 11 of the Office Action mailed on 2/3/10 since limitations of claims 18-19 is now incorporated into claim 1.

The references of Gelbart, Young and Schmidt are applied for the reasons discussed above.

6. Claims 1, 4-5, 12-19 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabuchi et al (US 5,945,463) in view of Watanabe et al '392, further in view of Gelbart '325, Young '640 and Schmidt '116 for the reasons discussed above.

Kawabuchi et al in view of Watanabe et al is applied here for the same reasons as set forth in paragraph 8 of the Office Action mailed on 2/3/10.

The references of Gelbart, Young and Schmidt are applied for the reasons discussed above.

7. Claims 1, 4-5, 12-17 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabuchi et al '463 in view of Watanabe et al '392, further in view of Bernd et al '541, and further in view of Gelbart '325, Young '640 and Schmidt '116 for the reasons discussed above.

Kawabuchi et al in view of Watanabe et al, further in view of Bernd et al is applied here for the same reasons as set forth in paragraph 9 of the Office Action mailed on 2/3/10.

The references of Gelbart, Young and Schmidt are applied for the reasons discussed above.

Art Unit: 1715

8. Claims 7, 8, 10, 12-15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al '392 in view of Kawabuchi et al '463, and further in view of Gelbart '325, Young '640 and Schmidt '116 or over Watanabe et al '392 in view of Bernd et al '541, further in view of Kawabuchi et al '463, and further in view of Gelbart '325, Young '640 and Schmidt '116, as applied above, and further in view of Wakamatsu '836 for the reasons of record set forth in paragraph 10 of the Office Action mailed on 2/3/2010.

9. Claims 7, 8, 10, 12-15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabuchi et al '463 in view of Watanabe et al '392, further in view of Gelbart '325, Young '640 and Schmidt '116 or over Kawabuchi et al '463 in view of Watanabe et al '392, further in view of Bernd et al '541, further in view of Gelbart '325, Young '640 and Schmidt '116, as applied above, and further in view of Wakamatsu '836 for the reasons of record set forth in paragraph 10 of the Office Action mailed on 2/3/2010.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1, 4, 5, 7, 8, 10, 12-17, 20, and 22-24 have been considered but are moot in view of the new ground(s) of rejection.

### **As to Kawabuchi**

(A) Applicants submit that on page 13 of the present Office Action, the Examiner responds to Applicant's previous arguments by referring to the same portion of Kawabuchi as discussed above (i.e., col. 9, lines 23-40). The Examiner specifically refers to Kawabuchi's explicit inclusion of an apparatus for irradiation of ultraviolet light being provided with the apparatus. Applicant submits that such fact is not in contention. Rather, Applicant submits that contrary to the Examiner's assertion, there is no teaching or suggestion of moving an irradiation outlet of the disclosed irradiation apparatus in association with the extrusion orifice of the dispenser 3. The Examiner specifically refers to Figure 1 of Kawabuchi. Such figure merely depicts the X, Y, Z driving robot 1, the tubing 2 that supplies the composition to be cured by UV light and the dispenser 3. As specifically disclosed in Kawabuchi, the dispenser first discharges the composition and the composition is then irradiated by ultraviolet light (col. 9, lines 33-40). Such apparatus for the irradiation of UV light is not depicted in Figure 1, nor is the storage tank



that stores the UV light curable composition. If anything, Figure 1 suggests that the UV apparatus is not connected with the X, Y, Z driving robot 1 because if there were any such connection it would be shown. Without any further disclosure in this regard, there is clearly no teaching of the dispenser 3 and the non-depicted apparatus for irradiation of UV light moving together.

The Examiner respectfully disagrees with this argument. First of all, Kawabuchi teaches that FIG. 1 is a *schematic* representation of an embodiment of **the apparatus** for discharging and curing the composition (See column 9, lines 24-29). Kawabuchi further teaches that **the apparatus** (i.e. *the apparatus for discharging and curing the composition*) is equipped with a control part for an X-Y-Z-driving robot 1, a pipe for supplying a composition curable by ultraviolet light 2, a dispenser 3, and an apparatus (i.e. *device*) for irradiation of ultraviolet light" (See column 9, lines 23-33). Therefore, contrary to Applicants' statement: "Such figure merely depicts the X, Y, Z driving robot 1, the tubing 2 that supplies the composition to be cured by UV light and the dispenser 3", Fig. 1 depicts not merely a dispensing subsystem but also a curing subsystem in addition to the dispensing subsystem. Since Fig. 1 is *schematic* representation of an embodiment of **the apparatus** for discharging and curing the composition, the absence of curing subsystem in the Fig. 1 does not mean that such a curing subsystem is absent in the apparatus. Therefore, Fig. 1 of the *schematic* representation of an embodiment of **the apparatus for discharging and curing the composition** *implies* the presence of the irradiation device connected to a dispensing subsystem since both the dispensing subsystem and the irradiation device represent a single apparatus for discharging and curing the composition. Thus, in contrast to Applicants' assertion, Figure 1 does suggest that the UV apparatus is connected with the X, Y, Z driving robot 1 (even though the connection is not shown in Fig. 1) because Fig. 1 is only a *schematic* representation of the apparatus for discharging and curing the composition, and because Kawabuchi teaches that FIG. 1 represents a (single) apparatus for discharging and curing the composition, i.e. both the dispensing subsystem and the irradiation device.

Note that Applicants' statement: "As specifically disclosed in Kawabuchi, the dispenser first discharges the composition and the composition is then irradiated by ultraviolet light (col. 9, lines 33-40)" is irrelevant because claim 1 does not recite curing *while* dispensing.

(B) Applicants further submit that in Example 6 of Kawabuchi, the UV light is irradiated "in such a manner that the side of the adhesive layer of the length of 30 mm was directly irradiated by the light from the direction of the side." This clearly indicates that the step of dispensing the UV curable composition and the step of UV irradiation are two independent steps performed successively because it is simply impossible to dispense the UV curable composition onto one steel plate, and simultaneously irradiate UV light to the UV curable composition sandwiched between two steel plates sideways if the x-y-z driving automatic coating robot is equipped with a UV lamp. Therefore, it is reasonably expected that Example 5 is also performed in a similar manner because Example 6 is not particularly noted for its uniqueness of two-step procedure. Accordingly, it is reasonably understood that the apparatus of Kawabuchi includes the dispenser shown in Figure 1, an independent storage tank, and an independent apparatus for irradiating UV light. At a minimum, there is clearly no suggestion of a UV irradiation outlet being moved in association with the extrusion orifice of a three-dimensional automatic coating apparatus.

The Examiner respectfully disagrees with this argument. First of all, Applicants' statement that the UV light is irradiated "in such a manner that the side of the adhesive layer of the length of 30 mm was directly irradiated by the light from the direction of the side." is directed to examining the adhesive strength of the compositions used in Samples A and C by applying the compositions between two plates (See column 14, lines 40-55), and, thus, totally irrelevant to UV curing of gasket discharged onto a metal plate as shown in Fig. 1.

In contrast to Applicants' assertion, the *relevant* part of the Example 6 describes that the gasket discharged onto a metal plate is cured in accordance with the same procedures as those conducted in Example 5 (See column 14, lines 25-29), and Example 5 describes curing the discharged gasket by UV such that the section of the cured gasket had a shape of an approximate **half circle** (See column 13, lines 65-68).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELENA Tsoy LIGHTFOOT whose telephone number is (571)272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1715

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy Lightfoot, Ph.D.  
Primary Examiner  
Art Unit 1715

October 13, 2010

/Elena Tsoy Lightfoot/